(129)

Sohn

- Misc

- 1946

Slope Correction For 300 Ft. Tape

1° — 0	4° — 0.7	7° — 2.2
1°-30 — 0.1	4°30 — 0.9	7°30 — 2.6
2° — 0.2	5° — 1.1	8° — 2.9
2°-30 — 0.3	5-30 — 1.4	8°30 — 3.3
3° — 0.4	6° — 1.6	9° — 3.7
3°-30' — 0.6	6-30 — 1.9	9-30 — 4.1

A.E. Kooter — owner of

CLAY DEPOSITS - ORDER OF WORK

FIELD

1. Topographic Map or Planimetric Map.
2. Geologic Map and Geologic Field Notes.
3. Geologic sketches and extra maps.
   Ex. Stanford Cross Section, Benson Pit,
   Canfield Pits, Rogers Pit.
4. Petrographic Specimens and Specimen Catalog.
5. Photographs and Photograph Catalog.

OFFICE

1. Bureau Drill Holes: Vertical and Horizontal Control. Plot them on map.
2. Copy Drill Hole logs.
3. Copy Drill Hole- Sample assays.
4. Make Cross Sections. At right angles.
5. Calculate tonnage from assays, logs, and assumed cutoff values.
6. Write report.

% of Slope	Horizontal Spacing of Contours		
	100'	50'	25'
2	2862'	1431'	716'
4	1445'	723'	361'
6	951'	476'	238'
8	783	392	196
10	567	284	142
12	470	235	118
14	401	201	100
16	349	175	87
18	308	154	77
20	275	138	69
22	248	124	62
24	224	112	56
26	205	103	51
28	188	94	47
30	173	86	43
32	160	80	40
36	137	69	34
40	119	60	30
45	100	50	25
50	84	42	21
60	58	29	9
70	36	18	9
80	18	9	5

Note:
See Bradley for Ostracods I
Green Riv. Fm. (Eocene) USGS PP. 140, 1926
p. 125.

Sat Breakfast 40¢
room 4.00
~~fruit~~ .12
lunch - .35

1 9
N70E 650' 70°E1

Naegeli

Stebinger Tables

100 feet horizontal

from M.M. Knechtel, U.S.G.S.

0	0.000	25	0.245	50	0.490	75	0.735	100	0.980	125	1.225
1	0.0098	26	0.255	51	0.500	76	0.745	101	0.990	126	1.235
2	0.0196	27	0.265	52	0.510	77	0.755	102	1.000	127	1.245
3	0.0294	28	0.274	53	0.519	78	0.764	103	1.009	128	1.254
4	0.039	29	0.284	54	0.529	79	0.774	104	1.019	129	1.264
5	0.049	30	0.294	55	0.539	80	0.784	105	1.029	130	1.274
6	0.059	31	0.304	56	0.549	81	0.794	106	1.039	131	1.284
7	0.069	32	0.314	57	0.559	82	0.804	107	1.049	132	1.294
8	0.078	33	0.323	58	0.568	83	0.813	108	1.058	133	1.303
9	0.088	34	0.333	59	0.578	84	0.823	109	1.068	134	1.313
10	0.098	35	0.343	60	0.588	85	0.833	110	1.078	135	1.323
11	0.108	36	0.353	61	0.598	86	0.843	111	1.088	136	1.333
12	0.118	37	0.363	62	0.608	87	0.853	112	1.098	137	1.343
13	0.127	38	0.372	63	0.617	88	0.862	113	1.107	138	1.352
14	0.137	39	0.382	64	0.627	89	0.872	114	1.117	139	1.362
15	0.147	40	0.392	65	0.637	90	0.882	115	1.127	140	1.372
16	0.157	41	0.402	66	0.647	91	0.892	116	1.137	141	1.382
17	0.167	42	0.412	67	0.657	92	0.902	117	1.147	142	1.392
18	0.176	43	0.421	68	0.666	93	0.911	118	1.156	143	1.401
19	0.186	44	0.431	69	0.676	94	0.921	119	1.166	144	1.411
20	0.196	45	0.441	70	0.686	95	0.931	120	1.176	145	1.421
21	0.206	46	0.450	71	0.696	96	0.941	121	1.186	146	1.431
22	0.216	47	0.461	72	0.706	97	0.951	122	1.196	147	1.441
23	0.225	48	0.470	73	0.715	98	0.960	123	1.205	148	1.450
24	0.235	49	0.480	74	0.725	99	0.970	124	1.215	149	1.460

150	1.470	180	1.764	210	2.058	240	2.352	270	2.646	300	2.940
151	1.480	181	1.774	211	2.068	241	2.362	271	2.656	301	2.950
152	1.490	182	1.784	212	2.078	242	2.372	272	2.666	302	2.960
153	1.499	183	1.793	213	2.087	243	2.381	273	2.675	303	2.970
154	1.509	184	1.803	214	2.097	244	2.391	274	2.685	304	2.980
155	1.519	185	1.813	215	2.107	245	2.401	275	2.695	305	2.990
156	1.529	186	1.823	216	2.117	246	2.411	276	2.705	306	3.000
157	1.539	187	1.833	217	2.127	247	2.421	277	2.715	307	3.010
158	1.548	188	1.842	218	2.136	248	2.430	278	2.724	308	3.020
159	1.558	189	1.852	219	2.146	249	2.440	279	2.734	309	3.030
160	1.568	190	1.862	220	2.156	250	2.450	280	2.744	310	3.040
161	1.578	191	1.872	221	2.166	251	2.460	281	2.754	311	3.050
162	1.588	192	1.882	222	2.176	252	2.470	282	2.764	312	3.060
163	1.597	193	1.891	223	2.185	253	2.479	283	2.773	313	3.070
164	1.607	194	1.901	224	2.195	254	2.489	284	2.783	314	3.080
165	1.617	195	1.911	225	2.205	255	2.499	285	2.793	315	3.090
166	1.627	196	1.921	226	2.215	256	2.509	286	2.803	316	3.100
167	1.637	197	1.931	227	2.225	257	2.519	287	2.813	317	3.110
168	1.646	198	1.940	228	2.234	258	2.528	288	2.822	318	3.120
169	1.656	199	1.950	229	2.244	259	2.538	289	2.832	319	3.130
170	1.666	200	1.960	230	2.254	260	2.548	290	2.842	320	3.140
171	1.676	201	1.970	231	2.264	261	2.558	291	2.852	321	3.150
172	1.686	202	1.980	232	2.274	262	2.568	292	2.862	322	3.160
173	1.695	203	1.989	233	2.283	263	2.577	293	2.871	323	3.170
174	1.705	204	1.999	234	2.293	264	2.587	294	2.881	324	3.180
175	1.715	205	2.009	235	2.303	265	2.597	295	2.891	325	3.190
176	1.725	206	2.019	236	2.313	266	2.607	296	2.901	326	3.200
177	1.735	207	2.029	237	2.323	267	2.617	297	2.911	327	3.210
178	1.744	208	2.038	238	2.332	268	2.626	298	2.920	328	3.220
179	1.754	209	2.048	239	2.342	269	2.636	299	2.930	329	3.230

330	3.240	360	3.538	390	3.832	420	4.146	450	4.470	480	4.746
331	3.250	361	3.548	391	3.842	421	4.157	451	4.479	481	4.755
332	3.260	362	3.558	392	3.852	422	4.168	452	4.488	482	4.764
333	3.270	363	3.567	393	3.861	423	4.178	453	4.498	483	4.774
334	3.280	364	3.577	394	3.871	424	4.189	454	4.507	484	4.783
335	3.290	365	3.587	395	3.881	425	4.200	455	4.516	485	4.792
336	3.300	366	3.597	396	3.891	426	4.211	456	4.525	486	4.801
337	3.310	367	3.607	397	3.901	427	4.222	457	4.534	487	4.810
338	3.320	368	3.616	398	3.910	428	4.232	458	4.544	488	4.820
339	3.330	369	3.626	399	3.920	429	4.243	459	4.553	489	4.829
340	3.340	370	3.636	400	3.930	430	4.254	460	4.562	490	4.838
341	3.350	371	3.646	401	3.941	431	4.265	461	4.571	491	4.847
342	3.360	372	3.656	402	3.952	432	4.276	462	4.580	492	4.856
343	3.370	373	3.665	403	3.962	433	4.286	463	4.590	493	4.866
344	3.380	374	3.675	404	3.973	434	4.297	464	4.599	494	4.875
345	3.390	375	3.685	405	3.984	435	4.308	465	4.608	495	4.884
346	3.400	376	3.695	406	3.995	436	4.319	466	4.617	496	4.893
347	3.410	377	3.705	407	4.006	437	4.330	467	4.626	497	4.902
348	3.420	378	3.714	408	4.016	438	4.340	468	4.636	498	4.912
349	3.430	379	3.724	409	4.027	439	4.351	469	4.645	499	4.921
350	3.440	380	3.734	410	4.038	440	4.362	470	4.654		
351	3.450	381	3.744	411	4.049	441	4.373	471	4.663		
352	3.460	382	3.754	412	4.060	442	4.384	472	4.672		
353	3.469	383	3.763	413	4.070	443	4.394	473	4.682		
354	3.479	384	3.773	414	4.081	444	4.405	474	4.691		
355	3.489	385	3.783	415	4.092	445	4.416	475	4.700		
356	3.499	386	3.793	416	4.103	446	4.427	476	4.709		
357	3.509	387	3.803	417	4.114	447	4.438	477	4.718		
358	3.518	388	3.812	418	4.124	448	4.448	478	4.728		
359	3.528	389	3.822	419	4.135	449	4.459	479	4.737		

Schedule for Field Description of Sedimentary Rocks.

NOTE.—Define all terms that might be at all uncertain. Use metric units if possible. Describe first the largest units recognized, then those of the next order, and so on down to the smallest.

A. External form of the rock unit. Lenticular, persistent, very regular in thickness, etc.; dimensions.

B. Color. Color of unit as a whole, wet or dry, according to Ridgway or Munsell color system, or color card of this committee.

C. Bedding.

1. How manifested: Sharp, by partings, by difference in texture, color, etc.; transitional; shaly (see introductory note).

2. Shape of bedding surfaces: Plane, undulating, ripple-marked, etc.; irregular; if not plane, give details of form and dimensions of features.

3. Thickness of beds: Comparative thicknesses; different orders. Relation of thicknesses; rhythmic; random. If variable, relation between thickness and composition, bedding, etc.

4. Attitude and direction of bedding surfaces: Horizontal, inclined, curved. Relation to each other: Parallel, intersecting, tangential; angles between different attitudes and directions; dips, strikes; dimensions; relation of size, composition, shape, etc., to attitude and direction; relation of composition to different types of bedding.

5. Markings of bedding surfaces: Mud cracks, rain prints, bubble impressions, ice-crystal impressions, trails, footprints, etc.

6. Disturbances of bedding: Edgewise or intraformational conglomerates, folding or crumpling of individual beds before consolidation, etc.

D. Composition.

1. Inorganic constituents.

a. Mineralogy or lithology of principal constituents.

b. Size: Prevailing size if fairly uniform; range in sizes if not; proportions of different sizes as determined by sieving where feasible; distribution of sizes with relation to other features; vertical and lateral variations in size.

c. Shape: Crystalline (automorphic), angular, subangular, subrounded, rounded; relation of shape to size, material, position in beds, etc. For quantitative results on pebbles, etc., estimate or measure radius of curvature of sharpest edge, mean radius, and maximum and minimum diameter.

D. Composition—Continued.

1. Inorganic constituents—Continued.

d. Character of surface: Glossy, smooth, mat, pitted, chatter marked, etc.

e. Orientation: If not equidimensional, direction of greater dimensions with respect to bedding, to each other, etc.

f. Chemical and internal physical condition: Fresh, weathered, decomposed, cracked, etc.

g. Packing: Closeness and manner.

h. Pore space.

i. Cement: Present or absent; proportion; composition; variations in composition vertically and laterally and in relation to other characters; disposition with respect to bedding, fractures, etc.

j. Color: Wet or dry; location, inherent or as a stain in constituents or cement; variations and their relation to other factors, as composition, porosity, bedding, fracturing, fossils.

2. Organic constituents.

a. Kinds.

b. Size: Does the distribution of sizes show effects of mechanical deposition?

c. Condition: Entire, fragmented, partly dissolved, etc. Relation to kinds.

d. Distribution: With respect to character of beds, kinds of organisms, bedding, evidence of burrowing, etc.

e. Orientation: With respect to bedding; with respect to life habits, possible manner of death, etc.

E. Concretions.

1. Form, size, color, composition, and their variations.

2. Internal structure; central nucleus organic or inorganic; central hollow; homogeneous; banded horizontally, concentrically, etc.; radial; compact; vesicular.

3. Boundary against country rock: Sharp, transitional with or without change in character.

4. Relation of bedding to concretions: Continuous through concretions; deflected above, below, or both; thinned above, below, etc.

5. Distribution: Random; regular; if regular, intervals between groups (layers), vertically and horizontally; differences between characters of concretions in different groups (layers). Relation of distribution to other characters, as mechanical, chemical, or organic composition of country rock; jointing, fissuring, folding, etc., of country rock; topography; ground-water level; etc.

GOVERNMENT PRINTING OFFICE

Project:
Location of trench:

Formation: Member:
Bed no: Sample no:
Fossil collection no:
Distance above base of formation:
Distance above base of member:
Thickness of bed: Of fossilif.zone:
Distance of zone above base of bed:
Lithology of bed:

Pct. of rock composed of fossils:
Recognizable phyla or classes and pct.of ea:

Recognizable genera,species,etc.and pct.of ea:

Preservation:
Type:
Mineral composition:

Condition:

Evidence of reworking:
Size of fossils and fragments:

Distribution within bed:

Orientation:

Special modes of occurrence:

Additional notes on ecology:

Miscellaneous notes:

Collectors:

Date:

Date:

Geologist:

Trench:

Bed	Sample	Thickness	Rock Name	Number and thickness of lithologic units	Thickness of layers	Nature of contact with bed below	Gradation of lithology within bed	Fractures or joints

19371

19471

Color	Reaction to HCl	Hardness	Fossils	Mineral Composition	Component Particles	
					Size	Shape

Form 9—076

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16—37601-1

CORRECTIONS FOR EARTH CURVATURE AND REFRACTION

Derived from

FORMULA- $.00000002059 \times (\text{Distance in Feet})^2$

or $.574 \times (\text{Distance in Miles})^2$.

DISTANCE (100s of feet)	Correction (Feet)	DISTANCE (100s of feet)	Correction (Feet)	DISTANCE (100s of feet)	Correction (Feet)	DISTANCE (100s of feet)	Correction (Feet)	DISTANCE (100s of feet)	Correction (Feet)
50	.5	200	8.2	350	25.2	500	51.5	650	87.0
55	.6	205	8.7	355	26.0	505	52.6	655	88.4
60	.7	210	9.1	360	26.7	510	53.6	660	89.7
65	.9	215	9.5	365	27.4	515	54.6	665	91.1
70	1.0	220	10.0	370	28.2	520	55.7	670	92.4
75	1.2	225	10.4	375	29.0	525	56.7	675	93.8
80	1.3	230	10.9	380	29.8	530	57.9	680	95.2
85	1.5	235	11.4	385	30.6	535	59.0	685	96.6
90	1.7	240	11.9	390	31.3	540	60.1	690	98.0
95	1.9	245	12.4	395	32.1	545	61.1	695	99.5
100	2.1	250	12.9	400	33.0	550	62.3	700	100.8
105	2.3	255	13.4	405	33.8	555	63.5	705	102.3
110	2.5	260	13.9	410	34.6	560	64.6	710	103.8
115	2.7	265	14.5	415	35.5	565	65.8	715	105.3
120	3.0	270	15.0	420	36.3	570	66.9	720	106.7
125	3.2	275	15.6	425	37.2	575	68.1	725	108.2
130	3.5	280	16.2	430	38.1	580	69.3	730	109.7
135	3.8	285	16.7	435	39.0	585	70.5	735	111.2
140	4.0	290	17.3	440	39.9	590	71.7	740	112.7
145	4.3	295	17.9	445	40.8	595	72.9	745	114.2
150	4.6	300	18.5	450	41.7	600	74.2	750	115.8
155	4.9	305	19.2	455	42.6	605	75.4	755	117.4
160	5.3	310	19.8	460	43.6	610	76.7	760	118.9
165	5.6	315	20.4	465	44.5	615	77.9	765	120.4
170	6.0	320	21.1	470	45.5	620	79.2	770	122.0
175	6.3	325	21.7	475	46.5	625	80.5	775	123.6
180	6.7	330	22.4	480	47.5	630	81.8	780	125.2
185	7.0	335	23.1	485	48.5	635	83.1	785	126.8
190	7.4	340	23.8	490	49.5	640	84.4	790	128.5
195	7.8	345	24.5	495	50.5	645	85.7	795	130.1
								800	131.7

9/11/46 P. 5-42

SE¼, SW¼ Sec. 9 T. 6 N, R 38 E Treasure Co, Mont.
So. of Finch, Mont.
Coll. after 4 days rain.
Section (hand level).

Base alluvium 0

8 (interval 5.4') above canal alluvium - Top of Canal 40' above

Dark gray shale sample Ph. 1 49'

Lighter gray shale Ph 2 53'

15 Sandy sh. Ph 3 80

17 Sandy sh Ph. 4 92'
1'± below hard ss. layer.

19 Shaly sand soft Light brown 102'
Ph 5

22 from 103' to 119 117'
light colored sand with brown,
shale partings
Ph. 6 tan ss. 2-3' below
cap of hard ss. at 117'

24 Interbedded hard and soft ss. 128'
Ph. 7 ss & brown (?) shale at 122'

"ss. P13 #1" (22–24)

See Bull 812 p. 8-9, Fig pl. 2A
Shows outcrop.

— Beaman —

1. Put gun on rod
2. Level Beaman bubble
3. Move Tangent screw to read whole beaman interval
4. record interval, read center hair on rod.
5. Read Stadia
6. Read Horizontal correction

Interval x beaman ± rod = d. ft. El.
800'
8.0 x beaman ± rod = d. ft. el.

Over the rod

1. Put Top hair at base of rod.
2. read Stebbinger drum.
3. Move stebbinger so top hair is top of rod.
4. read drum.
5. Move Stebbinger so bottom hair is Top of rod.
6. read drum.

$$\frac{4}{\text{Rod}} = \frac{6}{x}$$

Summer 1946

1 - 2	Acزada Basin, Paris [illegible]
3	Casper, [illegible] 1/25 f22 α 6/14/46 [illegible]
4.	Knoebel [illegible] Springs 6/15/46
5.	Spence Dome Wyo. Cal [illegible] Tool [illegible]
Sec 4 T55N R 95W sample at 50'	Oil well #4 → [illegible] June 14, 1946 f32, 1/25 α [illegible]
6 Embossed	Bentonite Wyo. " " 22 " " [illegible]
7	Bentonite mine 6 mi. from Cody f8, 1/25 α June 14 1946 9 [illegible] → NW
8	Black [illegible] Yellowstone f16 1/25 30 1/4 [illegible]

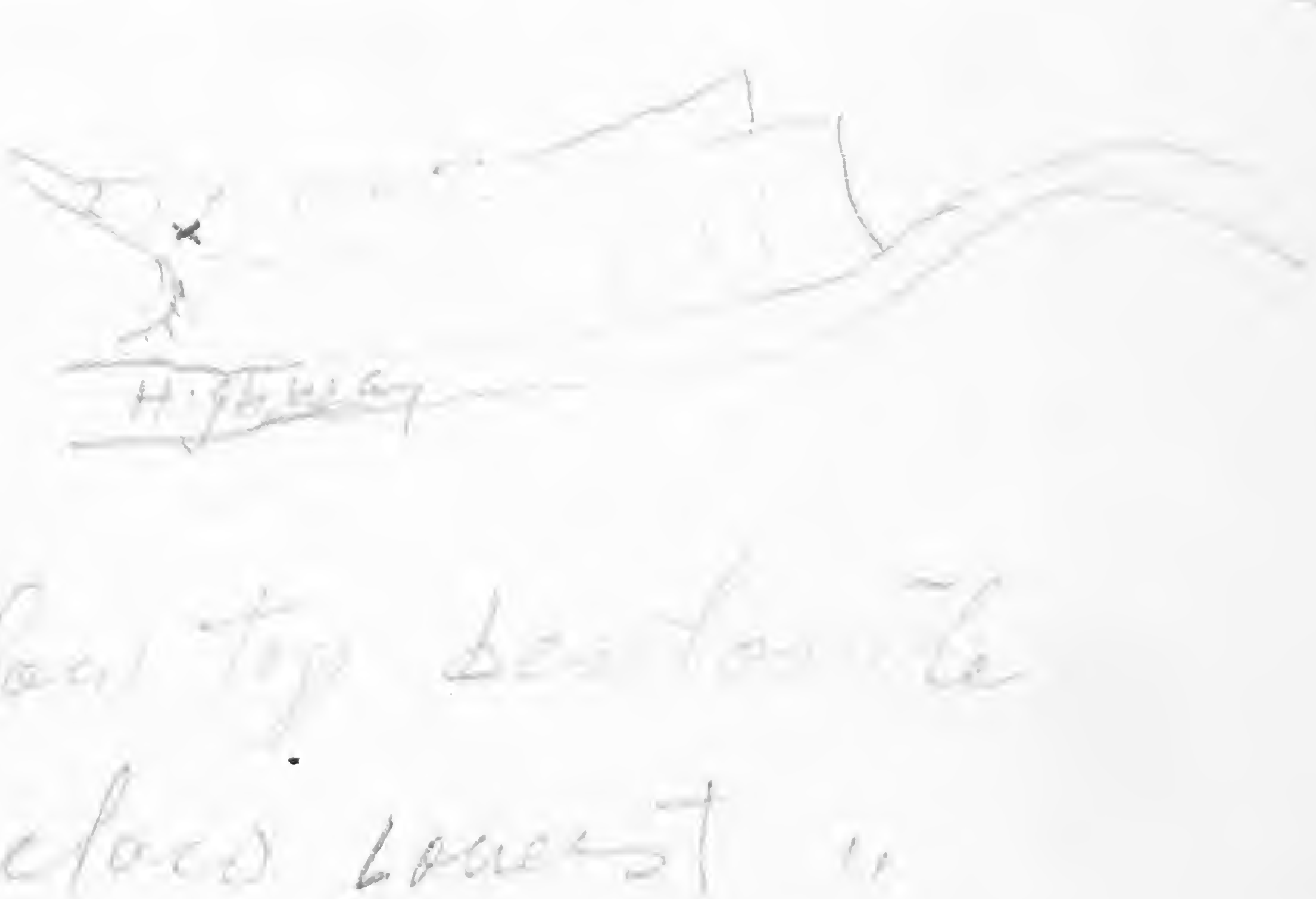
Ansco Supreme

Ansco Supreme

1	Old faithful f16 1/100 α } 6/15/46
2	"
3	"
4.	"
6/16/46 5	Yellowstone falls f32 1/50 α up
6	" " 1/25 " down
7	

Spec.

1. June 5 – Greenhorn ls. shaly bed associated with fossils see Folio 108.
about 4 mi. W. of Edgemont, S.D. N of highway #18 N. side of NW gully about 40' cliff in middle of cliff – weathered surface limy shale makes E facing scarp.
Locality near Top of hill W of hogback



2. 2a. below top bentonite
2b. below lowest "

see R.C.Spivey
Bentonite in S.W. S. Dakota
Univ S.D. G.S. Rept Invest. #36

Milepost 29 (Stanford Cent)

Main SS&L

contributions to the Late Flora of Idaho
Thomas R. Ashley, 1932.
Northwest Science
Vol. 6 # 2 p. 69 refs 9 ; p. 70 - 71.

NW Science Aug. 1940 ✓

1942

USGS PP 154 H - 1928
147 - 1926